

REMARKS

This paper is responsive to any paper(s) indicated above, and is responsive in any other manner indicated below.

REPLACEMENT TITLE

The title has been objected to because of the Office Action concerns listed within the section numbered "6" on page 3 of the Office Action, i.e., as not being sufficiently descriptive. As the foregoing replacement title is believed to be sufficiently descriptive of the invention to which the claims are directed, reconsideration and withdrawal of the objection to the title, are respectfully requested. In the event that the present replacement title is itself found not to be sufficiently descriptive, the Examiner is herein authorized to amend to a suitable replacement title.

PENDING CLAIMS

Claims 1-16 were pending, under consideration and subjected to examination in the Office Action. Appropriate claims have been amended, canceled and/or added (without prejudice or disclaimer) in order to adjust a clarity and/or focus of Applicant's claimed invention. That is, such changes are unrelated to any prior art or scope adjustment and are simply refocused claims in which Applicant is present interested. At entry of this paper, Claims 1-6 and 17-32 will be pending for further consideration and examination in the application.

REJECTION UNDER 35 USC '102

The 35 USC '102 rejection of claims 1-6 as being anticipated by Hamerslag et al. (4,854,649) is respectfully traversed. However, such rejections have been rendered obsolete by the present clarifying amendments to Applicant's claims, and accordingly, traversal arguments are not appropriate at this time. However, Applicant respectfully submits the following to preclude renewal of any such rejections against Applicant's clarified claims.

All descriptions of Applicant's disclosed and claimed invention, and all descriptions and rebuttal arguments regarding the applied prior art, as previously submitted by Applicant in any form, are repeated and incorporated hereat by reference. Further, all Office Action statements regarding the prior art rejections are respectfully traversed. As additional arguments, Applicant respectfully submits the following.

In order to properly support a '102 anticipatory-type rejection, any applied art reference must disclose each and every limitation of any rejected claim. The applied art does not adequately support a '102 anticipatory-type rejection because, at minimum, such applied art does not disclose (or suggest) the following discussed limitations of Applicant's claims.

Applicant's disclosed and claimed invention is directed to arrangements (e.g., chip carriers, modules, etc.) affording optical components the ability to operate efficiently at high frequencies (e.g., 20+ GHz, and even 40 GHz). One aspect of Applicant's invention is that Applicant's chip carrier is formed starting with a dielectric or semiconductor substrate (101; FIGS. 1A-1B). A metal-coated portion (e.g., for mounting devices thereon) is formed on one surface, another metal-coated portion is formed on an opposite (rear) surface, and importantly, a side metal-coated

portion is formed on a side of the substrate to electrically connect the two metal-coated portions.

Regarding invention, Applicant found that, with a dielectric or semiconductor substrate having opposing metal-coated portions, inductance effects could degrade an efficiency/operation of the arrangement. Accordingly, Applicant further found that provision of a side metal-coated portion (interconnecting the two metal-coated portions) could advantageously operate as an inductance-reducing structure, which would allow the arrangement to operate at improved efficiency at high-frequencies. Accordingly, all of Applicant's present claims commonly include the "dielectric or semiconductor substrate" and interconnecting side "metal-coated portion" on the side of the substrate. It is respectfully noted that added "module" claims 29-32 contain the limitations of "carrier" claims 19-22, respectively.

Turning now to rebuttal of the Hamerslag et al. reference, it is respectfully submitted that Hamerslag et al.'s disclosure is based upon using a metal frame. That is, attention is directed to Hamerslag et al.'s column 8, lines 21+, which describe a "Kovar alloyed metal". Hamerslag et al. purposefully uses metal because the arrangement has to be "sufficiently malleable to allow necessary deformation during adjustment" (column 5, lines 60-63) of Hamerslag et al.'s "extending arm 32". Further, it is respectfully noted that use of a metal substrate facilitates Hamerslag et al.'s subsequent plating with a nickel layer and then a gold layer (column 8, lines 22-28) to improve a reflectability of the "extending arm 32" as a reflector.

According to all of the above, and from the main gist of the Hamerslag et al. disclosure, Hamerslag et al.'s invention/disclosure is wholly directed to an objective differing from Applicant's invention. That is, Hamerslag et al.'s metal-plating is for the purpose of reflectability, and Hamerslag et al.'s metal frame is for the purpose of

maleability/adjustability. In contrast, Applicant's metal-coated portions (and especially the side metal-coated portion) is directed to reducing negative inductance effects associated with use of a dielectric or semiconductor substrate.

In addition to the foregoing, the following additional remarks from Applicant's foreign representative are also submitted in support of traversal of the rejection and patentability of Applicant's claims.

According to the invention defined in the claims the chip carrier has a good optical response characteristic and high frequency response for a bandwidth over 20 GHz, which is also necessary for a optical semiconductor device to be operated with 40 Gbit/s.

In contrast, Hamerslag discloses an optical transmitter assembly or reflector assembly having a metal-plated plate capable of varying a reflection angle, so that a light from an optical source is readily led into a light sensor with a plate angle changed, even though the light sensor position is inaccurate on the assembly.

In the case of Hamerslag, the Examiner has understood that an optical source and light sensor are mounted on a lead frame 82, but the lead frame 82 is a metal-plated plate to be formed of a reflector assembly. The Examiner has also interpreted that the blank 84A and 84B correspond to via-holes of the present invention, but these are just cavities to be formed of the reflector assembly. At the final step of forming or producing an optical transmitter assembly, the lead frame 82 is cut out from the frame, referring to column 9, lines 52-54, therefore, the side surface of optical transmitter assembly is not of the metal-coated portion, the lead frame 82 and blank 84 do not form an optical transmitter assembly.

As a result of all of the foregoing, it is respectfully submitted that the applied art would not support a '102 anticipatory-type rejection of Applicant's claims.

Accordingly, reconsideration and withdrawal of such '102 rejection, and express written allowance of all of the '102 rejected claims, are respectfully requested.

EXAMINER INVITED TO TELEPHONE

The Examiner is herein invited to telephone the undersigned attorneys at the local Washington, D.C. area telephone number of 703/312-6600 for discussing any Examiner's Amendments or other suggested actions for accelerating prosecution and moving the present application to allowance.

RESERVATION OF RIGHTS

It is respectfully submitted that any and all claim amendments and/or cancellations submitted within this paper and throughout prosecution of the present application are without prejudice or disclaimer. That is, any above statements, or any present amendment or cancellation of claims (all made without prejudice or disclaimer), should not be taken as an indication or admission that any objection/rejection was valid, or as a disclaimer of any scope or subject matter. Applicant respectfully reserves all rights to file subsequent related application(s) (including reissue applications) directed to any/all previously claimed limitations/features which have been subsequently amended or cancelled, or to any/all limitations/features not yet claimed, i.e., Applicant continues (indefinitely) to maintain no intention or desire to dedicate or surrender any limitations/features of subject matter of the present application to the public.

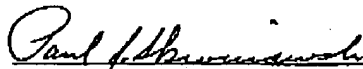
CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully submits that the claims listed above as presently being under consideration in the application are now in condition for allowance. Accordingly, early allowance of such claims is respectfully requested.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 500.43702X00), and please credit any excess fees to such deposit account.

Respectfully submitted,

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